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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,729	11/20/2003	Roger L. Stolte	1149.1101101	8697

164 7590 10/09/2007  
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EXAMINER

DOUYON, LORNA M

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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10/09/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/717,729

**Applicant(s)**

STOLTE ET AL.

**Examiner**

Lorna M. Douyon

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-4, 10, 12, 14, 16-18, 23-32, 34-35, 38, 40-41, 47, 49, 51, 53-55, 60-69 are is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Continuation of Disposition of Claims: Claims pending in the application are 1, 3-4, 10, 12, 14, 16-18, 23-32, 34-35, 38, 40-41, 47, 49, 51, 53-55, 60-69.

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 19, 2007 has been entered.
2. Claims 1, 3-4, 10, 12, 14, 16-18, 23-32, 34-35, 38, 40-41, 47, 49, 51, 53-55, 60-69 are pending.
3. The rejection of claims 1, 5-9, 11-18, 21, 22, 34, 36, 38, 42-46, 48-55, 58 and 59 under 35 U.S.C. 103(a) as being unpatentable over Curry et al. (US Patent No. 4,560,492) is withdrawn in view of Applicants' amendment and arguments therein.
4. The rejection of claims 19-20 and 56-57 under 35 U.S.C. 103(a) as being unpatentable over Curry as applied to the above claims, and further in view of Magari et al. (US Patent No. 4,416,809) is withdrawn in view of Applicants' amendment and arguments therein.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1, 3-4, 10, 12, 14, 16-18, 23-32, 34-35, 38, 40-41, 47, 49, 51, 53-55, 60-69 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation "a ratio of HEDTA to water by weight is at least about 3:1" in independent claims 1, 34 and 38 are nowhere supported in the specification and is therefore considered as new matter. While there is support for about 3:1 HEDTA/H<sub>2</sub>O by wt. on page 2, lines 27-31 for the term "about" and page 28, Example G1 for 3:1, the term "at least" has no upper limit and may cause the claim to read literally on embodiments outside the range discussed on pages 23-32 of the specification. See MPEP 2163.05 III. The same is true for dependent claims 3, 35 and 40 in the recital of "at least about 3.5:1".

7. Claims 1, 3-4, 10, 12, 14, 16-18, 23-32, 34-35, 38, 40-41, 47, 49, 51, 53-55, 60-69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In independent claims 1, 34 and 38, the "cleaning agent" reads on most of the recited cleaning ingredients, and claims in which the recited components of a Markush group may read upon one another do not meet the requirements of 35 U.S.C. 112, second paragraph; that is, the members of a Markush group must be mutually exclusive, see *Ex parte Clark*, 174 USPQ 40 (BPAI 1971).

The rest of the claims, being dependent upon independent claims 1, 34 and 38, are rejected as well.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 3, 4, 16, 34, 35, 38, 40, 41 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 818,151.

GB '151 teaches a detergent composition comprising 20 parts by weight ethanolethylenediaminetriacetic acid, sodium salt (another name for HEDTA), 40 parts by weight T.S.P.P. (tetrasodium pyrophosphate which reads on inorganic detergent, alkaline source, cleaning agent or builder) and 5-10 parts by weight water (see page 3, lines 75-80). The weight ratio of HEDTA to water is 4:1 to 2:1. GB '151 teaches the limitations of the instant claims. Hence, GB '151 anticipates the claims.

***Claim Rejections - 35 USC § 103***

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1, 3-4, 10, 16-18, 24-28, 30, 32, 34-35, 38, 40-41, 47, 53-55, 61-65, 67, 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steindorf (US Patent No. 5,340,501) for the reasons set forth in the previous office action and which is repeated below for Applicant's convenience.

Steindorf teaches a detergent composition as a solid cast block which includes a sodium based alkaline source as a deterative component which is typically sodium hydroxide or sodium silicate (see col. 3, lines 1-9), potassium salt of an aminocarboxylic acid as a sequestrant, and may also include potassium based alkaline source, sodium salt of an aminocarboxylic acid, water for facilitating processing and permitting solidification, a hydrating agent for facilitating solidification, a secondary sequestrant, and/or other typical detergent additives such as dyes, perfumes, bleaching agents, fillers and the like (see col. 2, lines 44-55). The solid cast block detergent compositions are commonly produced from about 2 to about 20 kg in size (see col. 1, lines 20-22). One suitable aminocarboxylic acid chelating agent is N-hydroxyethyl-ethylenediaminetriacetic acid (HEDTA) (see col. 3, lines 38-42). The alkali metal salts of the aminocarboxylate sequestering agent should comprise about 20 to 40 wt% of the detergent composition (see col. 3, lines 55-59). The hydrating agent for facilitating

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solidification which includes anhydrous sodium carbonate, among others, is only optional (see col. 4, lines 9-29). A secondary sequestering agent includes sodium tripolyphosphate (see col. 5, line 23). The detergent composition should comprise about 15-25 wt%, preferably about 15-20 wt% water including both free water and water of hydration (see col. 5, lines 38-41). Steindorf also teaches a solid cast warewashing detergent composition comprising about 20 to about 40 wt% of a mixture of sodium and potassium salts of an aminocarboxylic acid sequestrant and about 9 to about 30 wt% of hydration (see claim 5). The detergent composition is conveniently formulated by sequentially (i) combining an aminocarboxylic acid sequestrant with a sufficient proportion of a potassium alkaline source, (ii) adding a sufficient proportion of a sodium alkaline source, (iii) adding other desired components such as additional water, a casting, a surfactant like nonionic surfactant, and/or a secondary chelating agent, and then (iv) casting the composition (see col. 2, lines 18-30; col. 4, lines 46-63). The detergent composition may be cast directly into a receptacle (see col. 6, lines 25-30). Steindorf, however, fails to specifically disclose (1) a solid binding agent comprising HEDTA and water, and in their recited weight ratio (2) the composition being formed as a solid mass in the range of 50 grams or less as required in claims 24 and 61.

With respect to difference (1) it would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare a solid binding agent comprising HEDTA and water, and to optimize their proportions because it is known to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by



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optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the prima facie case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a prima facie case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

With respect to difference (2) it would have been obvious to one of ordinary skill in the art at the time the invention was made to change the size of the solid because a change in size is generally recognized as being within the level of ordinary skill in the art, see *In re Rose*, 105 USPQ 237 (CCPA 1955).

12. Claims 10, 17, 18, 24-28, 30, 32, 47, 54, 55, 61-65, 67 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB '151 as applied to the above claims, and further in view of Steindorf.

GB '151 teaches the features as described above. In addition, GB '151 teaches, in a preferred embodiment, a detergent composition which is of an alkaline nature which may contain alkali in the form of caustic alkali or carbonate, but contains an alkali metal

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orthophosphate or pyrophosphate in balanced proportion with certain polyamino polycarboxylic acid chelating agents (see page 1, lines 38-4), like HEDTA as described above. GB '151 also teaches detergent compositions containing a water-soluble, anion-active or non-ionized surface-active agent, and either an alkanolamide of a fatty acid containing at least 8 carbon atoms in the molecule, or a sulphonamide obtainable from an alkanolamide and an aliphatic monosulphochloride containing at least 8 carbon atoms in the molecule (see page 4, lines 61-78). GB '151, however, fails to disclose sodium tripolyphosphate, the incorporation of alkali metal silicate, the weight of the composition, and the composition formed as a solid block in a container.

Steindorf, an analogous art, teaches the features as described above. In addition, Steindorf teaches the equivalency of tetrasodium pyrophosphate and sodium tripolyphosphate as condensed phosphates (see col. 5, lines 16-23) and the equivalency of sodium hydroxide (caustic alkali) with sodium silicate as alkaline sources (see col. 3, lines 1-9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute tetrasodium pyrophosphate of GB '151 with sodium tripolyphosphate, and the caustic alkali with sodium silicate because the substitution of art recognized equivalents as shown by Steindorf is within the level of ordinary skill in the art. In addition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare the compositions of GB '151 in sizes, and in containers, as those recited because it is known from Steindorf that a similar detergent

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composition is prepared in such sizes and which may be cast directly into a receptacle as disclosed by Steindorf in col. 6, lines 25-30.

13. Claims 12, 14, 23, 29, 31, 49, 51, 60, 66 and 68 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Steindorf or GB '151 as applied to the above claims, and further in view of Rolando et al. (US Patent No. 5,876,514).

Steindorf or GB '151 teaches the features as described above. Steindorf or GB '151, however, fails to disclose the specific nonionic surfactant which comprises linear alcohol, the incorporation of a linear alkylate sulfonate surfactant, and the composition in the form of an extrudate or a pellet.

Rolando teaches a similar composition comprising nonionic surfactants like the condensation of fatty alcohols having 8-20 carbon atoms and alkylene oxide (see col. 3, line 66 to col. 4, line 9), other surfactants which may be used as solidifying agent, for example, linear alkyl benzene sulfonate (see col. 9, line 65 to col. 10, line 5). The composition may take any number of physical forms including compressed, extruded solid or cast solid and the compressed solid includes solids formed by extrusion, tableting, pelletizing and the like (see col. 11, lines 51-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the nonionic surfactant of Steindorf or GB '151 with the condensation of fatty alcohols having 8-20 carbon atoms and alkylene oxide nonionic surfactant of Steindorf or GB '151 because Steindorf or GB '151 desires nonionic surfactants which are stable under alkaline solution and Rolando provides

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such nonionic surfactant, to have incorporated a linear alkyl benzene sulfonate into the composition because this will assist in solidifying the composition as taught by Rolando and to have prepared the composition of Steindorf or GB '151 in an extrudate or pellet form because it is known from Rolando that similar compositions can be prepared in cast, extrudate and pellet form.

### ***Response to Arguments***

14. Applicants' arguments filed July 19, 2007 have been fully considered but they are not persuasive.

With respect to the rejection based upon Steindorf, Applicants argue that the Office Action pointed out that Steindorf teaches alkali metal salts of the aminocarboxylate sequestering agent, such as HEDTA, should comprise about 20-40 wt%, preferably about 25-35 wt%, of the detergent composition (Col. 3, lines 55-58), with water comprising 15-25 wt%, preferably about 15-20 wt% (Col. 5, lines 38-41), hence, at its broadest disclosure, Steindorf thus teaches a HEDTA/H<sub>2</sub>O ratio by weight of 40 to 15, or 2.67:1, and preferentially teaches even tighter ratios (for example, 35 to 15 = 2.33:1, 25 to 20 = 1.25:1, etc.), all of which lie below the claimed 3:1 ratio of the amended independent claims.

The Examiner respectfully disagrees with the above arguments because, as discussed above, Steindorf also teaches a solid cast warewashing detergent composition comprising about 20 to about 40 wt% of a mixture of sodium and potassium salts of an aminocarboxylic acid sequestrant, like HEDTA, and about 9 to about 30 wt%

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of hydration (see claim 5). Thus, Steindorf teaches, at most, HEDTA:water weight ratio of 40:9 or 4.44:1, which meets the recited weight ratio of at least 3:1. Hence, Steindorf teaches weight ratios which overlaps those recited.

With respect to the rejection based upon Steindorf in view of Rolando, Applicants argue the same reasoning as in Steindorf above.

The above response to Steindorf applies here as well.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references are considered cumulative to or less material than those discussed above.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is 571-272-1313. The examiner can normally be reached on Mondays-Fridays 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on 571-272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Lorna M. Douyon/  
Primary Examiner  
Art Unit 1751

LMD  
9-28-07